



December 13, 2016

Department of the Army
Los Angeles District, U.S. Army Corps of Engineers
Attn: Shannon Pankratz
Regulatory Division, CESPL-RG
915 Wilshire Blvd., Suite 930
Los Angeles, CA 90017
Shannon.L.Pankratz@usace.army.mil

**RE: PETERSEN RANCH MITIGATION BANK RELEASE OF CONSTRUCTION SECURITY
[USACE FILE NO: SPL-2012-00669-BEM, CDFW TRACKING NO: NO. 1798-2013-04-R5]**

Dear Interagency Review Team:

With this letter Land Veritas formally requests cancellation of the Irrevocable Standby Letter of Credit (LOC) that comprises the Construction Security for Area E of the Petersen Ranch Mitigation Bank. The construction security for the Petersen Ranch M.B. was provided to cover implementation of restoration activities as outlined in Exhibit C-2 of the BEI (Attachment #1). LOC #77-555399-4 is in the amount of \$1,207,876.00 (Attachment #2).

Section VIII.E.1.a.3 of the BEI reads as follows:

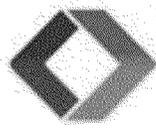
*Each letter of credit comprising the Construction Security shall be cancelled by USACE only after the Bank Sponsor completes the activities covered by that letter of credit, as outlined in **Exhibit C-2**, and in accordance with the Development Plan, as demonstrated by:*

- a) *Bank Sponsor's submission of as-built drawings in accordance with Section VII.A.2 and VII.C.4;*
- b) *An on-site inspection and confirmation by the IRT of satisfactory completion of construction and planting activities in accordance with the Development Plan; and*
- c) *Prior coordination with the IRT.*

Land Veritas Corp 1001 Bridgeway, Suite 246, Sausalito CA 94965

p 415.729.3733

ED_013814_00001346-00001



Section a. was completed with WRA's submittal of the as-built drawings and letter report on December 3, 2016 (Attachment #3). Section b. was completed on December 12, 2016 when the IRT attended a site visit with the Bank Sponsor and WRA. Section c. has been completed through our ongoing coordination with the IRT and with this letter.

As all required items have been completed in accordance with the BEI and Exhibit C-2 of the BEI, we request that the USACE cancel LOC #77-556399-4 following the instructions provided by First Republic Bank.

Sincerely,

H. Tracey Brownfield, President

Land Veritas Corp

Cc: Peter Terman, First Republic Bank

Nate Bello

Warren Wong

Sarvy Mahdavi



LAND VERITAS

Attachment 1

Land Veritas Corp 1001 Bridgeway, Suite 246, Sausalito CA 94965

p 415.729.3733

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Exhibit C-2: Construction Security Analysis and Schedule

EXHIBIT C-2

CONSTRUCTION SECURITY ANALYSIS AND SCHEDULE

The Bank Sponsor will provide a Construction Security to the USACE to provide financial assurance as outlined in section VI.A of the BEI for each Phase of the Bank. The Construction Security will guarantee the completion of Bank development activities to restore or enhance Waters of the U.S., Waters of the State, and Covered Habitats on the Bank Properties in accordance with the Development Plan (Exhibit C-1 of the BEI). The Construction Security will be funded for each Phase prior to the first credit release for that Phase and will be in the form of a Letter of Credit or Casualty Insurance policy in an amount equal to 100% of the construction cost estimates provided below. The USACE will have the right to draw on this security in accordance with section VIII.E.1.a of the BEI.

Construction Cost Estimate

The following cost estimates have been prepared by WRA, Inc..

Table 1. Construction Cost Estimates for Area A of the Petersen Ranch Bank Property

Ex. 4 CBI

Table 2. Construction Cost Estimates for Area B of the Petersen Ranch Bank Property

Ex. 4 CBI

Table 3. Construction Cost Estimates for Area C of the Petersen Ranch Bank Property

Ex. 4 CBI

Table 4. Construction Cost Estimates for Area D of the Petersen Ranch Bank Property

Ex. 4 CBI

Table 5. Construction Cost Estimates for Area E of the Elizabeth Lake Bank Property

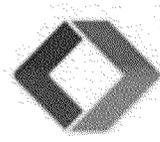
Ex. 4 CBI

Table 6. Construction Cost Estimates for Area F of the the Elizabeth Lake Bank Property

Ex. 4 CBI

Security Funding Schedule

As outlined in section VI.A of the BEI, the Bank Sponsor will furnish to the USACE the Construction Security for each Phase prior to the first credit release for that Phase. Initially, a construction security will be provided for Area A of the Petersen Ranch Bank Property and Area E of the Elizabeth Lake Bank Property, which comprise Phase 1. If at any time during the life of the security, the USACE draws upon the Construction Security for a particular phase, the Bank Sponsor will replenish the Construction Security as outlined section VIII.E.1.a.2 of the BEI. Each letter of credit will be released upon completion of the activities covered by that letter of credit pursuant to the relevant requirements outlined in section VIII.E.1.a.3 of the BEI.



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Attachment 2

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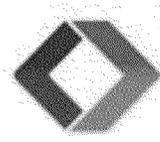
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FIRST REPUBLIC BANK
It's a privilege to serve you[®]

Ex. 4 CBI



LAND VERITAS

Attachment 3

Land Veritas Corp 1001 Bridgeway, Suite 246, Sausalito CA 94965

p 415.729.3733

ED_013814_00001346-00011



December 5, 2016

Department of the Army
Logans River Army Corps of Engineers
Attention: 6th Division PDKRDTZ
5601 Doby Circle - 5G
9150 Wilshire Blvd, Suite 900
Logan, CA 94001
6th Division, Logans River Army Corps of Engineers

Re: Petersen Ranch Mitigation Bank Elizabeth Lake Area E As-built Report [USACE File No: SPL-2012-00669-BEM, CDFW Tracking No: 1600-2015-0075-R5]

Dear Mr. [Name]:

As required by the contract, we have completed the final report for the Petersen Ranch Mitigation Bank Elizabeth Lake Area E As-built Report. This report provides a detailed description of the construction activities and the resulting mitigation bank. The report includes a description of the site, the construction methods used, and the results of the monitoring and evaluation. We have also provided a list of references and a glossary of terms. We hope this report meets your requirements and provides the information you need for your records.

In order to complete the report, we have reviewed all the data and information provided to us. We have also conducted a thorough review of the report to ensure that it is accurate and complete. We have also provided a list of references and a glossary of terms. We hope this report meets your requirements and provides the information you need for your records.

Crediting

Figure 4 shows the credit calculation for the Petersen Ranch Mitigation Bank Elizabeth Lake Area E As-built Report. The credit is calculated based on the area of the mitigation bank and the credit factor. The credit factor is determined by the type of mitigation bank and the quality of the mitigation bank. The credit factor for this mitigation bank is 1.0. The credit is calculated as follows: Credit = Area x Credit Factor = 1.0 x 1.0 = 1.0. We hope this information is helpful for your records.

T Dbl e 1. 6u mmDry of AreDE Oit ig Dt ion

| Mitigation Types | Acres |
|--|----------|
| 404 Mitigation Types | |
| Alluvi DI Floodpl Din Enh Dn cemen t | 0. 60 |
| Alluvi DI Floodpl Din 5e- est Dbl ish men t | 5. 7 6 |
| Alluvi DI Floodpl Din 5eh Dbi l i t Dt i o n | 5. 8 6 |
| Alluvi DI Floodpl Din 5i p Dri Dn B u f f er E n h Dn cemen t | 0. 4 8 |
| Alluvi DI Floodpl Din 5i p Dri Dn B u f f er 5e- est Dbl ish men t | 1. 21 |
| Alluvi DI Floodpl Din Up l Dn d B u f f er E n h Dn cemen t | 7 . 4 8 |
| Alluvi DI Floodpl Din Up l Dn d B u f f er 5e- est Dbl ish me t | 5. 4 7 |
| E p h emerDI 6t reDm E n h Dn cemen t | 0. 14 |
| E p h emerDI 6t reDm 5i p Dri Dn B u f f er E n h Dn cemen t | 1. 8 4 |
| E p h emerDI 6t reDm Up l Dn d B u f f er E n h Dn cemen t | 5. 59 |
| F res h wDt er 0 Drs h E n h Dn cemen t | 0. 10 |
| F res h wDt er 0 Drs h Up l Dn d B u f f er E n h Dn cemen t | 0. 28 |
| 2p en WDt er P res erv Dt i o n | 1. 23 |
| 2p en WDt er 5i p Dri Dn B u f f er E n h Dn cemen t | 8 . 22 |
| 1600 Mitigation Types | |
| Alluvi DI Floodpl Din Enh Dn cemen t | 0. 60 |
| Alluvi DI Floodpl Din 5e- Est Dbl ish men t | 51. 69 |
| Alluvi DI Floodpl Din 5eh Dbi l i t Dt i o n | 5. 8 5 |
| E p h emerDI 6t reDm E n h Dn cemen t | 0. 4 9 |
| F res h wDt er 0 Drs h E n h Dn cemen t | 0. 10 |
| 2p en WDt er P res erv Dt i o n | 1. 23 |
| Wet l Dn d 5i p Dri Dn E n h Dn cemen t | 5. 25 |
| 1o n - Wet l Dn d 5i p Dri Dn E n h Dn cemen t | 5. 69 |
| CESA Mitigation Types | |
| 6w Di n s o n ' s H Dwk F o r Dg i n g H Dbi t Dt P res erv Dt i o n | 151. 8 5 |
| CEQA Mitigation Types | |
| B Dre Gro u n d | 0. 4 0 |
| C h Dp DrrDI | 61. 7 2 |
| G reDt B Ds i n 6cru b | 62. 10 |
| 2p en WDt er | 1. 23 |
| 5i p Dri Dn F o res t | 13 . 55 |
| 6eep s , 0eDd o w s , 0 Drs h es | 4 . 20 |
| V DI l ey Dn d F o o t h i l l GrDs s l Dn d | 13 . 22 |

Habitat Restoration and Enhancement Activities

The h Dbi t Dt res t o rDt i o n Dn d en h Dn cemen t o Ddt li v i n e d i e s n o P c u r r e t , D s Dev el op men t Pl Dn , w i t h Dn y dev i Dt i o n s n o t e d i n t h i s r e p o r t . A AreDE Dct i v i t i e s i n c l u d e d e D r t h w o r k Dm g e r e e s n g i Dn i t h r e C u r t e (C 5 e 6 i t e # 1) , Dn d cDt t l e e x c l u s i o n f r o m t h e n o r t h e r n p D r t o f A r e D E .

E Drt h work Dn d 5o Dd Deco mmi s s i o n i n g

To en co u r Dg e n D t u r D l h y d r o l o g i c D n d g e o m o r p h o l o g i c D l p r o c e s s e s l o w e r e d s o t h D t i t i s b e l o w g r D d e o f t h i e g u p r e 5 s e D m w D n b e f u r f e D r e d D f t D e r i D l i m D g e r y o f t h e d D m D r e D, D n d c o n s t r u c t i o n d r D w i n g s i n A t t D B u r i e d r i p r D p w D s p l D c e d o n t h e c r e s t D n d d o w n s t r e D m s u r f D c e o f t h s t D b i l i z D t i o n . T h e e x i s t i n g e r o d e d d u t e l d e D m w D s c D t i e d t e d t D n e l e s t t d i r e c t s u r f D c e f l o w s o v e r t h e d D m c r e s t . T h e v o i d s i n t h e r i p r D p p l t o p s o i l D n d s e e d e d D s d e s c r i b e d b e l o w . E x c e s s C D r o y i d n e w C D v p t l e d c e D t u p l D n d s t o c k p i l e D r e D s d e s c r i b e d b e l o w . F i n D l l y , t h e m D i n D c c e s s r h D s b e e n d e c o m m i s s i o n e d D n d r e t u r n e d t o n D t i v e h D b i t D t s .

6o m e e D r t h w o r k i n t h e F r D k e s C D n y o n 5 e s t o r D t i o n 6 i t e (5 e s t o r D t i o n d e s c r i b e d i n P D r t V , , o f t h e D e v e l o p m e n t D d P w D n d e t c h n e x s s i t o m e d r D n d g o u t t o D l l o w f l o w s t o c o n t i n u e o n t u r f t D c e d 6 i w g u s i t e r e D n f o l w s o b e f p d r D f t e r 3 - D D e r i D l i m D g e r y o f t h e r o D d D r e D, D n d c o n s t r u c t i o n d r D w i n g c o n t o u r s . A l l e x c e s s s o i l e x c D v D t e d w D s d i s p o s e d o f i n t h e t w T h e f i l l D r e D s w e r e g r D d e d t o m i m i c n D t u r e d t t o o p l o e e D p t h e y t i p r D c h e D c o v e r e d i n t o p s o i l , D n d s e e d e d D s d e s c r i b e d b e l o w .

6e e d i n g

A f t e r e D r t h w o r k w D s c o m p l e t e d , t h e O u n z C D n y o n s e e d l e d o w d p l h D t h e w D s l f l o o d p l D i n s e e d m i x s h o w n i n T D b l e 2 . 6 i t e p r e p D r D t i o n D c t i v m e c h D n i c D l t i l l i n g . A t o t D l o f D p p r o x i m D t e l y 5 2 D c r e s w D s s e e d e m i x . T h e s e e d m i x d i f f e r s s l i g h t l y f e o m p l e m e n t t p r e s e n t p e d i n D r i t l h y e D v D i l D b i l i t y . T h e s e e d m i x r e m D i n s D n o p p l o e p D l D D l e r e p r e s e n t f D t d i c o d e s p i t e t h e c h D n g e s .

A d d i t i o n D l l y , t h e p o r t i o n o f F r D k e r D e D m y D p o w i t t o i n n o t f h A e r e D F m i u t o p s o i l s D l v D g e D n d s t o c k p i l e w D s s l e e d i e d w i t h t o w r D r o T s D b l o e n 3 c o D s t r e b y e r o s i o n c o n t r o l B e s t O D n D g e m e n t P r D c t i c e s . A t o t D l o f D p p r o x i t h e n D t i v e e r o s i o n c o n t r o l s e e d m i x . e d F e r D k w e r t s h C D m y D n l w i v l i D l b e f s l e o m i x u p o n i m p l e m e n t D t i o n o f t h e A r e D F u r e p e h D s p e m e n t P l D n i n D f u t

T Dbl e 2. A l l u v i D l F l o o d p l D i n 6 e e d O i x

| Scientific Name | Species Name | Application Rate (PLS Lb./Acre) | |
|---|--|---------------------------------|--------------|
| | | Development Plan | As-built |
| <i>Artemisia dracunculus</i> | w i l d t DrrDg o n | 1. 00 | 0. 10 |
| <i>Artemisia tridentata ssp. parishii</i> | P Dri s h ' s s Dg ebru s h | 1. 00 | 0. 25 |
| <i>Bromus ciliatus</i> | f r i n g e d bro me | 2. 00 | 2. 00 |
| <i>Elymus condensatus</i> | g i Dn t w i l d ry e | 2. 00 | U n Dv Di |
| <i>Elymus elymoides</i> | bo t t l ebru s h s q u i rrel t Di l | 2. 00 | 2. 00 |
| <i>Elymus trachycaulus</i> | s l e n d e r w h e D t g r D s s | 2. 00 | 2. 00 |
| <i>Eriodictyon crassifolium</i> | t h i c k l e D f y e r D s D n 8 D 00 | 0. 50 | |
| <i>Eriogonum fasciculatum</i> | C D l i f o r n i D b u c k w h e D t 00 | 1. 00 | |
| <i>Festuca microstachys</i> | s m D l l f e s c u e | 4 . 00 | 4 . 00 |
| <i>Lepidospartum squamatum</i> | s c D l e b r o o m | 1/ A | 1. 00 |
| <i>Lupinus truncatus</i> | co l l D r e d D n n u D l l u p i n e | 33 .00 | 00 |
| <i>Hordeum brachyantherum</i> | m e D d o w b D r l e y | 4 . 00 | 4 . 00 |
| <i>Melica imperfecta</i> | s m D l l f l o w e r m e l i c | 2. 00 | 2. 00 |
| <i>Muhlenbergia rigens</i> | d e e r g r D s s | 2. 00 | 0. 50 |
| <i>Poa secunda</i> | p i n e b l u e g r D s s | 4 . 00 | 4 . 00 |
| <i>Salvia apiana</i> | w h i t e s D g e | 1. 00 | 0. 50 |
| <i>Salvia columbariae</i> | ch i D s D g e | 1. 00 | 1. 00 |
| <i>Stipa pulchra</i> | p u r p l e n e e d l e g r D s s | 4 . 00 | 4 . 00 |
| TOTAL | | 40.00 | 31.85 |

Dbl e

T Dbl e 3 . 1 D t i v e E r o s i o n C o n t r o l 6 e e d O i x

| Scientific Name | Species Name | Application Rate (bulk Lb./Acre) |
|-----------------------------|-------------------------------|----------------------------------|
| <i>Bromus carinatus</i> | C D l i f o r n i D b r o m e | 20. 00 |
| <i>Festuca microstachys</i> | s m D l l f e s c u e | 8 . 00 |
| <i>Trifolium ciliolatum</i> | t r e e c l o v e r | 4 . 00 |
| TOTAL | | 32.00 |

Fencing, Gates, and Signage

A p p r o x i m D t e l y 6,7 3 0 l i n e D r f e e t (L F) r e c D t w i l l e x a l f u e - i f a r i n e f e n l c e w D s u i
D r o u n d t h e A r e D E c D t t l e e x c l u s i o n D r e D (A o t t t D a h b e n g D t @ w . D s 2 n e 1 6 t D l o l
c D t t l e e x c l u s i o n f e n c i n g , D n d t h e e x e r t i r D r g c e w D s e D t e f t t h e m D p h D e e
T r e s p D s s i n g " s i g n s h D v e b e e n p l D c e d D t h @ p l o p p o e i t r y t . s o f i n g r e s s t o

Summary

As we have reached completion of the redacted information in the Ared Es oif n
Peterson 5Dnch Oitig Dt ion B Dn k , Dnd h Dve demo nst rDt ed th Dt t
subst nti DI lly consist ent with th h e f Dv h e B Dm l e n G P h S o r o v e r e s h p D e c t
request rel eDs e of th e A r e D E C o n s t r u c t i o n i n c r e d i t e d s e D s e h d r t D h e 2 A r e D E c r e

,f you have any questions regarding this submit t t DI , pl eDs e d o n e
7 23 8 o r b y e m D i l D t b e l l o @ w r D - c D . c o m .

6i n c e r e l y ,

1Dt e B e l l o , W5A

Copy to : 6Drv y 0Dh d Dv i , E P A , 5e g i o n 9 , 0Dd h Dv i . s Drv y @ep D . g o v
WDrren Wo n g , C D F W , 5e g i o n 5 , D D v i d . L D w h e D d @ w i l d l i f e . c D .
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FIGURES

Figure 1. AreDE 404 Credits

Figure 2. AreDE 1600 Credits

Figure 3. AreDE CEQA Credits

Figure 4. AreDE CE6A Credits

Figure 5. Ounz CDn y o n B e f o r e D n d A f t e r A e r i D I

Figure 6. FrDk es CDn y o n B e f o r e D n d A f t e r A e r i D I

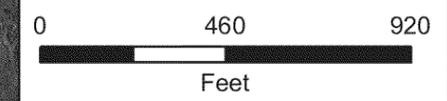
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Petersen Ranch
Mitigation Bank

Los Angeles County,
California

Figure 1.

Area E - 404
Mitigation Types



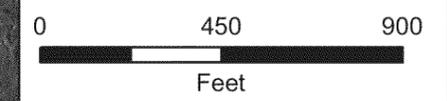
Map Date: 3/10/2016
Map By: fhourigan
Base Source: ESRI Streaming 5/8/10

**Petersen Ranch
Mitigation Bank**

Los Angeles County,
California

Figure 2.

Area E - 1600
Mitigation Types



Map Date: 3/10/2016
Map By: fhourigan
Base Source: ESRI Streaming 5/8/10

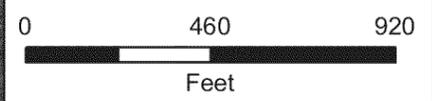


 Bank Property Boundary
Not Credited
 Road
 Easement
CEQA Credits
 Bare Ground* (0.40 acre)
 Chaparral (61.72 acres)
 Great Basin scrub (62.10 acres)
 Open water (1.23 acres)
 Riparian forest (13.55 acres)
 Seeps, meadows, marshes (4.20 acres)
 Valley and foothill grassland (13.22 acres)
* These credit types will only be used for species mitigation.



**Petersen Ranch
 Mitigation Bank**
 Los Angeles County,
 California

Figure 3 .
 Area E - CEQA
 Mitigation Types



Map Date: 3/10/2016
 Map By: fhourigan
 Base Source: ESRI World Imagery 5/8/10

Petersen Ranch
Mitigation Bank

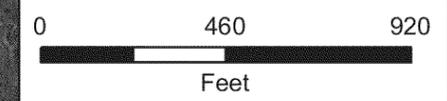
Los Angeles County,
California

Figure 4 .

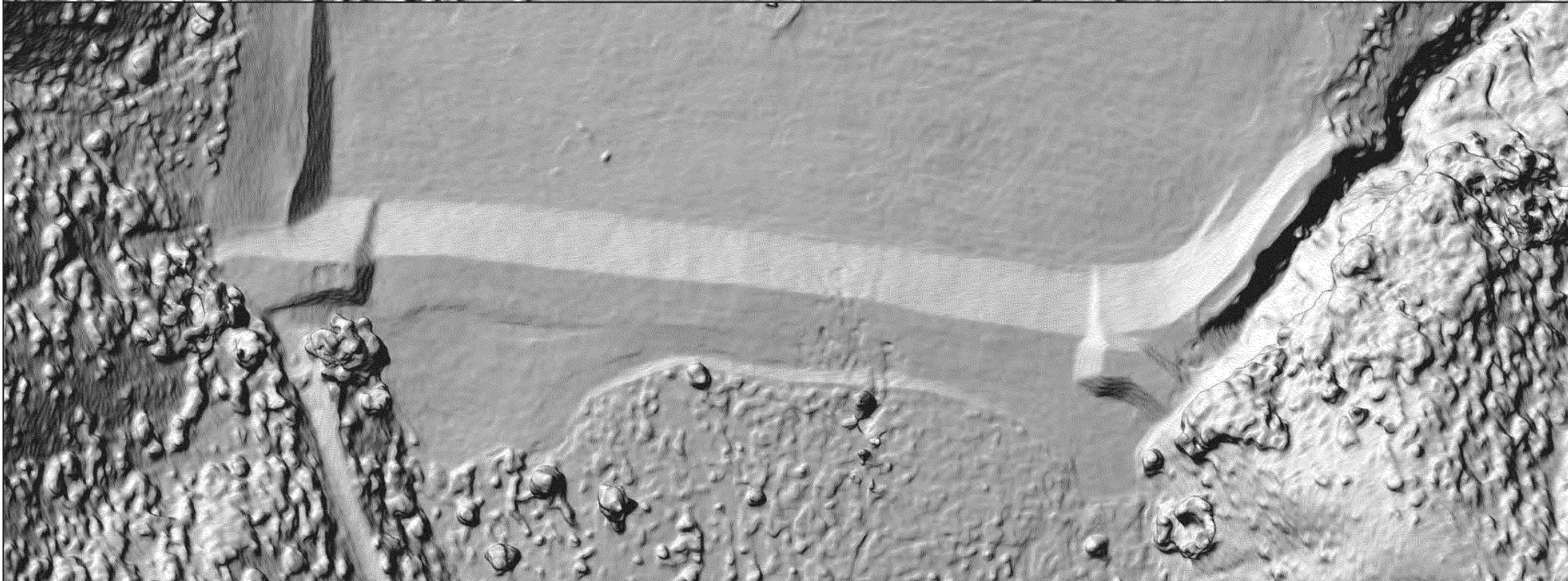
Area E - Swainson's Hawk
Mitigation Types



 Bank Property Boundary
Not Credited
 Road
 Easement
Swainson's hawk Credits
 Swainson's hawk foraging habitat (155.20 acres)

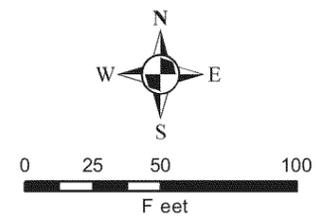


Map Date: 3/10/2016
Map By: fhourigan
Base Source: ESRI Streaming 5/8/10



Petersen 5Dn ch
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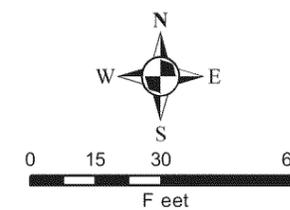
Figure 5. (Prep d
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 Dt 0un z CDn y o n



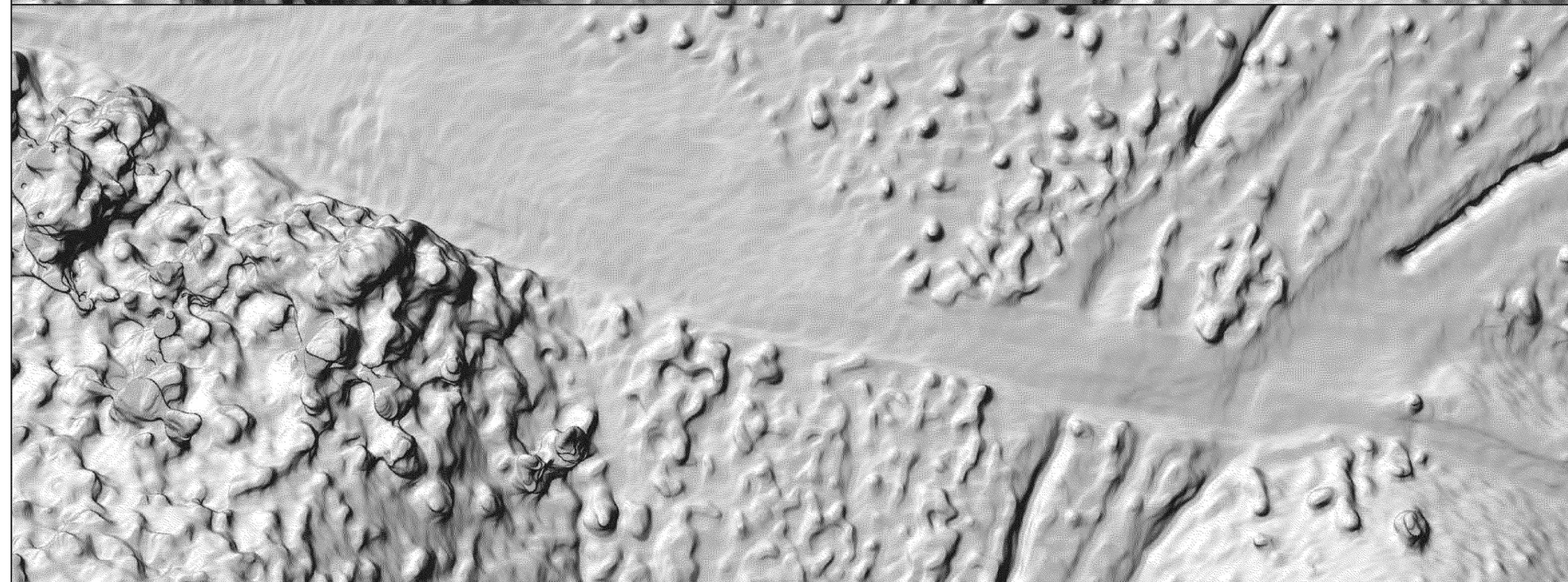
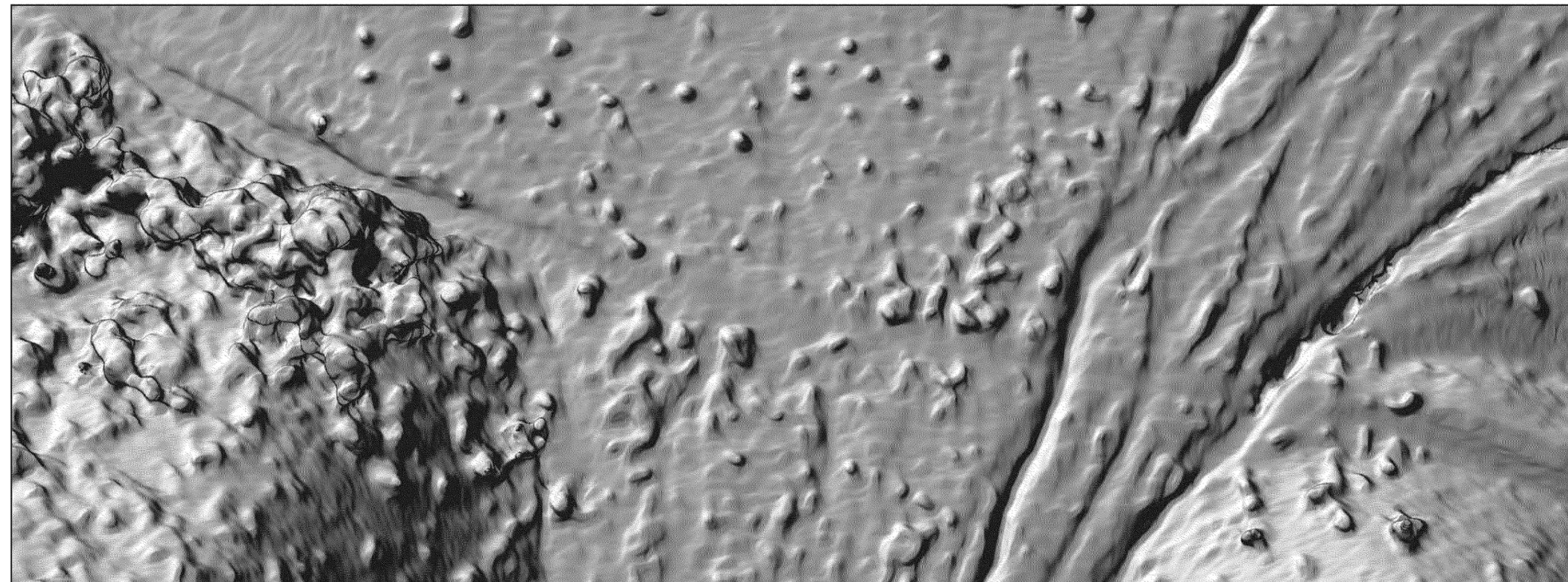
0Dp Prep Dred Ddt e: 11/ 22/ 2016
 0Dp Prep Dred By: sgillespie
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Petersen 5Dn ch
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Figure 6. (P r p d
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Dt FrDk es CDn y o

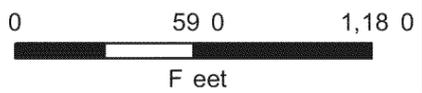
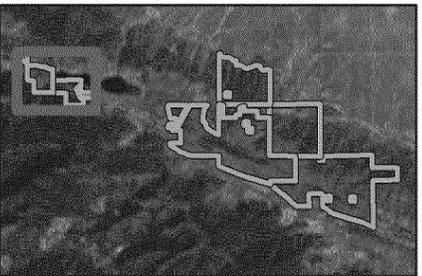


ODp P rep Dred Ddt e: 11/ 22/ 2016
ODp P rep Dred By: s g i l l e s p i e
BDs e 6o u r c e: U A V F l i g h t
DDt D 6o u r c e (s) : W5A



ATTACHMENT 1: PRE- AND POST-CONSTRUCTION PHOTOS

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- B Dn k P r o p e r t y B o u n d a r y
- L 2 G
- C o n s t r u c t i o n P o i n t



CPP- 1l o o k i n g n o r t h e D s t o n J u l y 1 8 , 2 0 1 6



CPP- 1l o o k i n g n o r t h e D s t o n N o v e m b e r 1 6 , 2 0 1 6



CPP- 1l o o k i n g s o u t h e D s t o n J u l y 1 8 , 2 0 1 6



CPP- 1l o o k i n g s o u t h e D s t o n N o v e m b e r 1 6 , 2 0 1 6



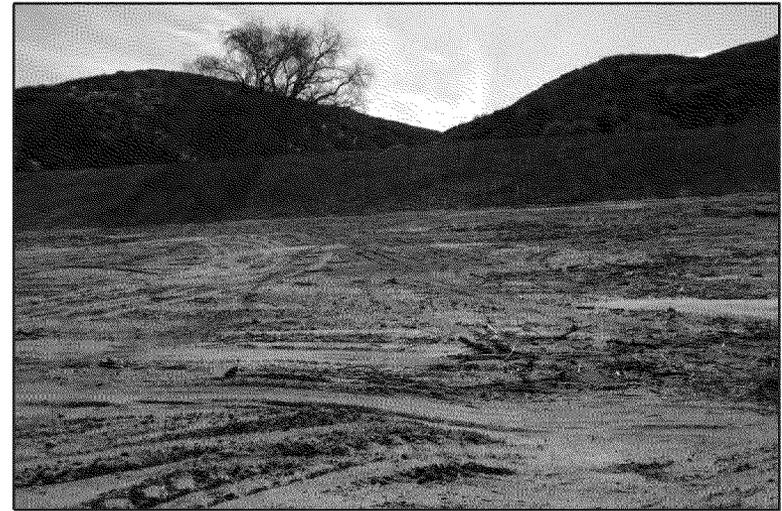
CPP- 2l o o k i n g w e s t o n J u l y 19 , 2016



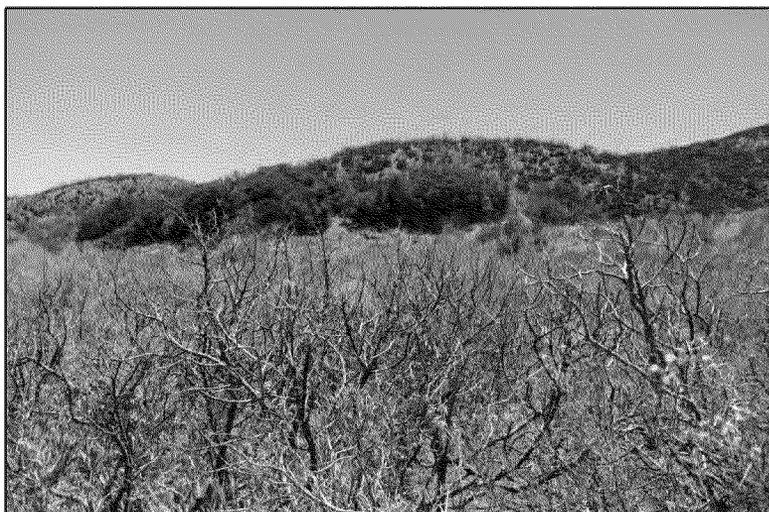
CPP- 2l o o k i n g w e s t o n 10 v e m b e r 16, 2016



CPP- 2l o o k i n g s o u t h o n J u l y 19 , 2016



CPP- 2l o o k i n g s o u t h o n 10 v e m b e r 16, 2016



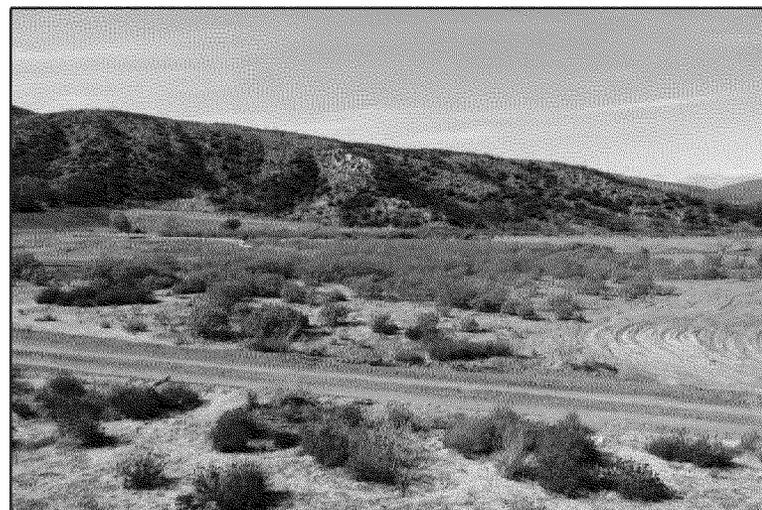
CPP- 2 looking eDst on July 18 , 2016



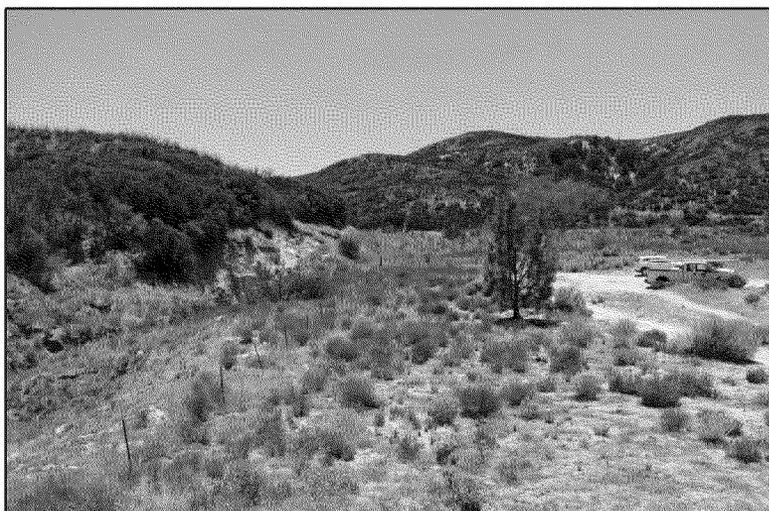
CPP- 2, looking eDset 16, 2016 v em



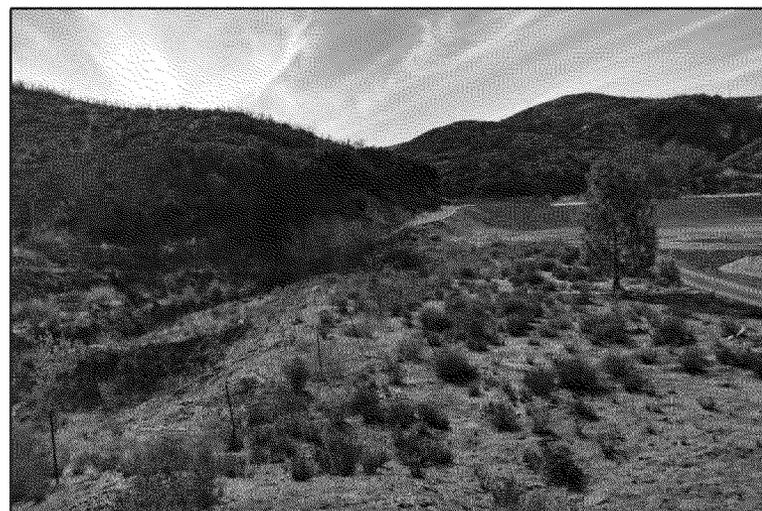
CPP- 3 looking northwest on July 18 ,2016



CPP- 3 looking northwest on November 16, 2016



CPP- 3 looking southwest on July 18 ,2016



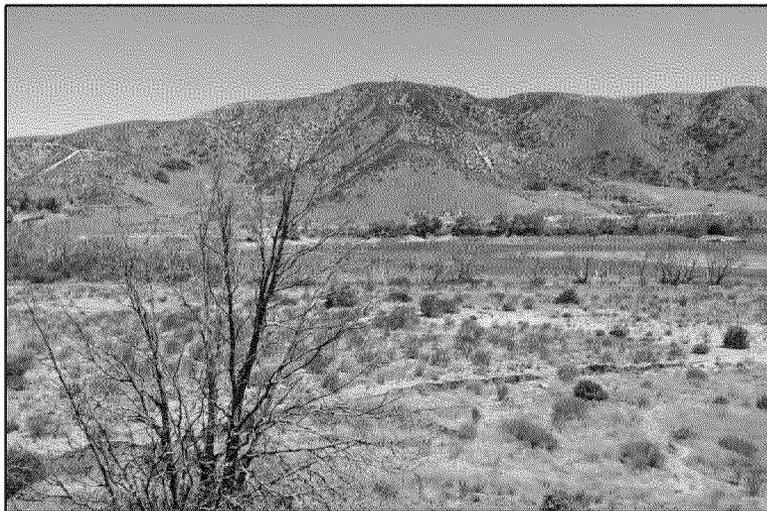
CPP- 3 looking southwest on November 16, 2016



CPP- 4 l o o k i n g n o r t h w e s t o n J u l y 19 , 2016



CPP- 4 l o o k i n g n o r t h w e s t o n 10 v e m b e r 16, 2016



CPP- 4 l o o k i n g n o r t h e s t o n J u l y 19 , 2016



CPP- 4 l o o k i n g n o r t h e s t o n 10 v e m b e r 16, 2016



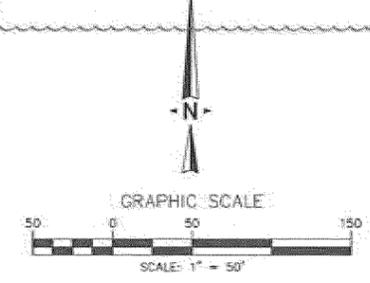
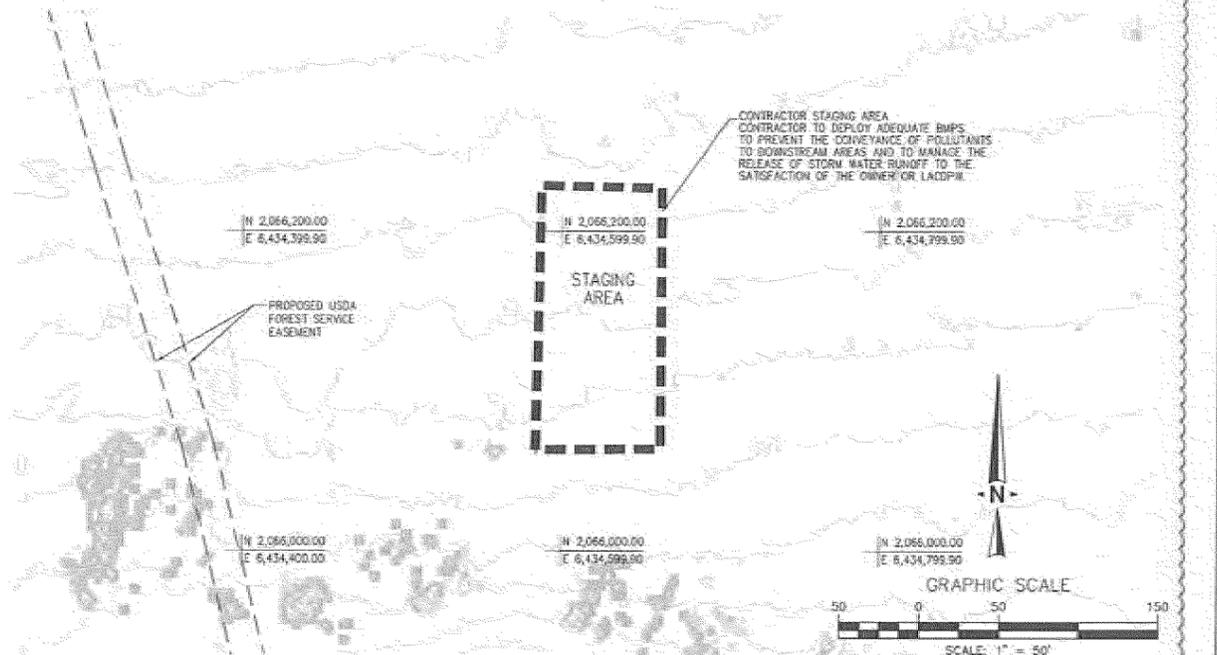
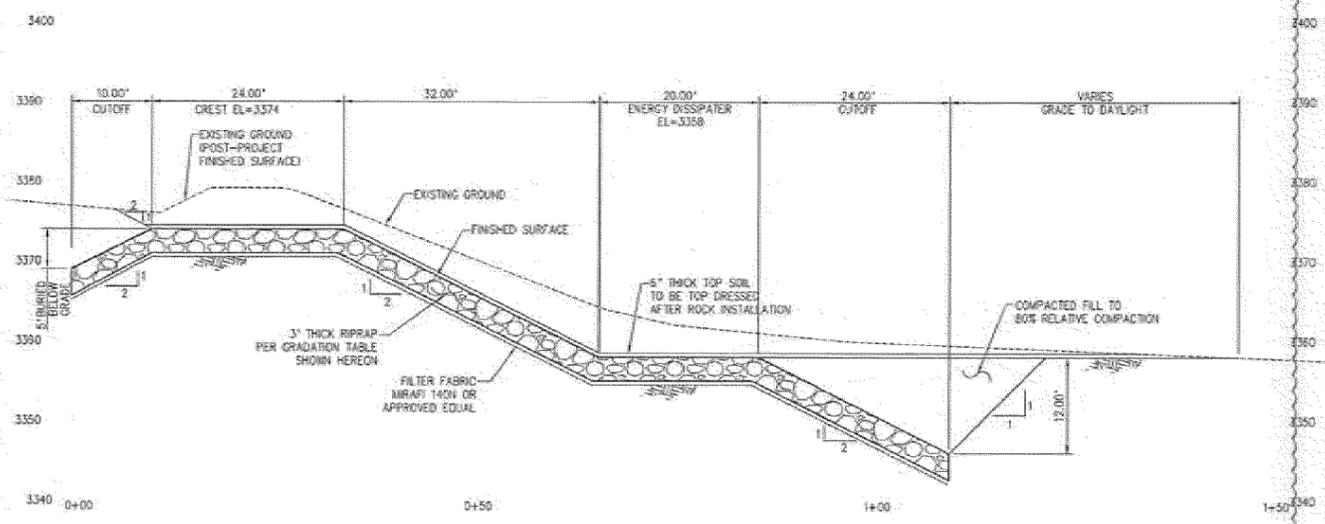
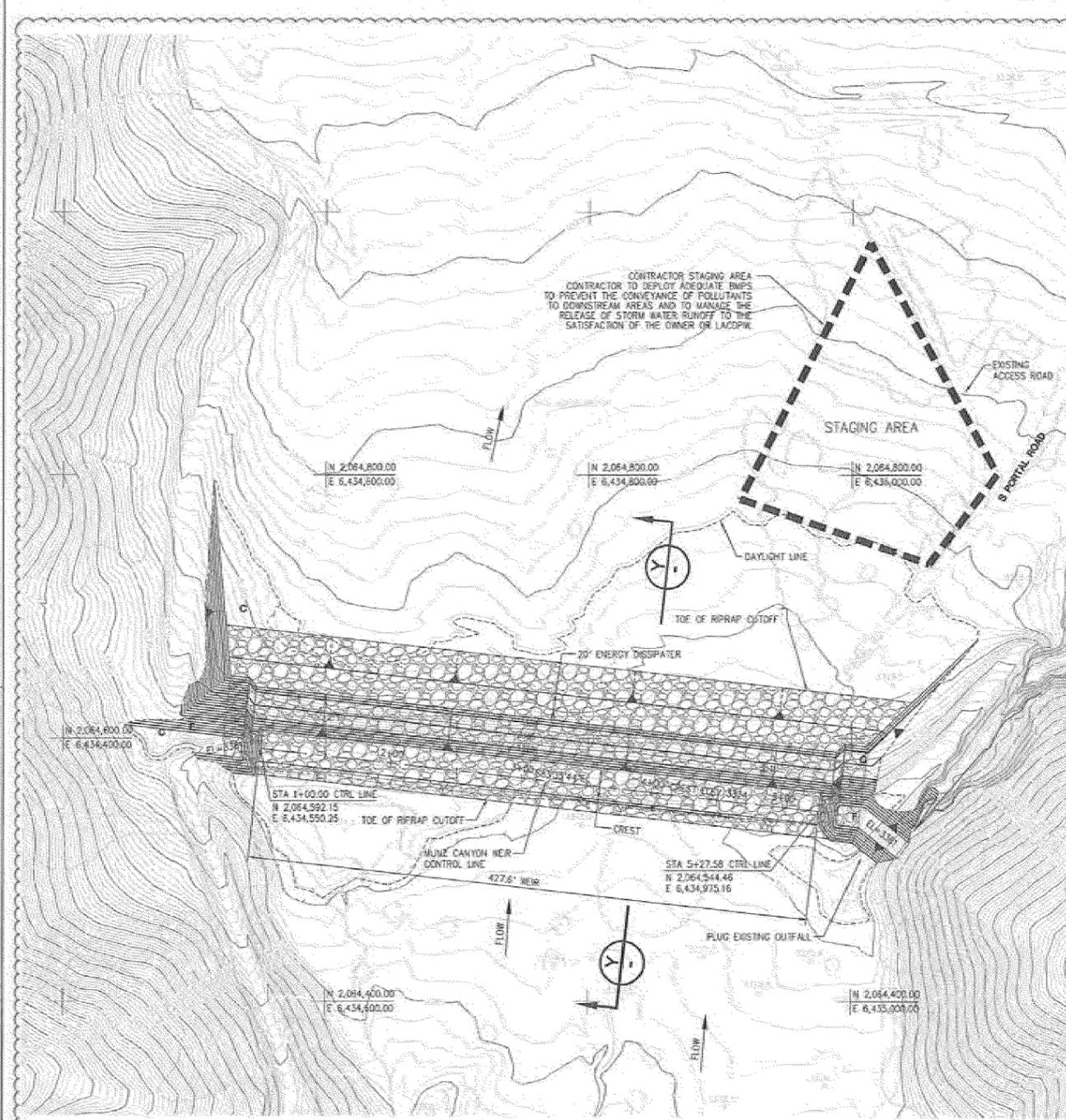
CPP - 5l o o k i n g eDs t o n J u l y 26, 2016



CPP - 5l o o k i n g eDs t 16, 2016 v e m b e

ATTACHMENT 2: CONSTRUCTION DRAWINGS

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- LEGEND**
- 3487 — PROPOSED CONTOUR
 - EXISTING CONTOUR
 - - - DAYLIGHT LINE
 - - - - - CUT-FILL TRANSITION LINE
 - - - - - MITIGATION BANK BOUNDARY
 - - - - - PROPERTY LINE
 - - - - - EASEMENT LINE
 - ▲ TOP OF SLOPE
 - X:1 SLOPE RATIO PER PLAN
 - ▲ TOE OF SLOPE
 - ◆ EXISTING TREE
 - ▤ EXISTING SEASONAL WETLAND
 - EXISTING TREE & SHRUB CANOPY

| RIPRAP GRADATION TABLE | | SIZE |
|---------------------------|-----------------------------|----------------------------------|
| PERCENT LIGHTER BY WEIGHT | LIMITS OF STONE WEIGHT, LBS | LIMITS OF STONE DIAMETER, INCHES |
| 51 - 100 | 900 - 2250 | 26.2 - 35.6 |
| 16 - 50 | 450 - 667 | 20.8 - 23.7 |
| 0 - 15 | 141 - 333 | 14.1 - 18.8 |

AS-BUILT

| NO. | REVISIONS | REVISED BY | APPROVED BY | DATE |
|-----|---|------------|-------------|------|
| 1 | CREST ELEV LOWERED TO 3374 FT, STAGING AREA ADDED | | | |
| 2 | AS-BUILT | | | |

PETERSEN RANCH MITIGATION BANK
GRADING PERMIT PLAN SET
MUNZ CANYON PLAN

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

VA Consulting, Inc.
ENGINEERS PLANNERS SURVEYORS

46 DISCOVERY, STE 250 (949) 474-1400 TEL
IRVINE, CA 92618 (949) 261-8482 FAX

11/11/15
DATE

TRIPM/CUP/RD NO. XXXXX

SHEET 12 OF 31

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MATCHLINE 1 - PLAN L-5A,3
 MATCHLINE 1 - PLAN L-5A,1



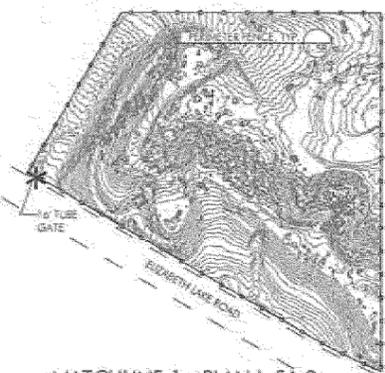
1 ELIZABETH LAKE FENCING PLAN VIEW
 1" = 200'



2 ELIZABETH LAKE FENCING PLAN VIEW - SOUTHEAST CORNER
 1" = 200'

LEGEND

- EXISTING CONTOUR
- ▨ STAGING/SOCKPILE AREA
- PERIMETER FENCE
- - - WILDLIFE FENCE (PROPOSED)
- WILDLIFE FENCE (AS-BUILT)
- * 12" TUBE GATE
- EXISTING UTILITY POLE
- ▨ EXISTING JURISDICTIONAL WETLAND



MATCHLINE 1 - PLAN L-5A,3
 MATCHLINE 1 - PLAN L-5A,1

3 ELIZABETH LAKE FENCING PLAN VIEW - NORTHWEST PARCEL
 1" = 200'

NOTES:

1. CONTRACTOR SHALL CLEAR VEGETATION ALONG FENCE ALIGNMENT. COORDINATE WITH PROJECT BIOLOGIST FOR NEST SURVEYS IF NECESSARY.

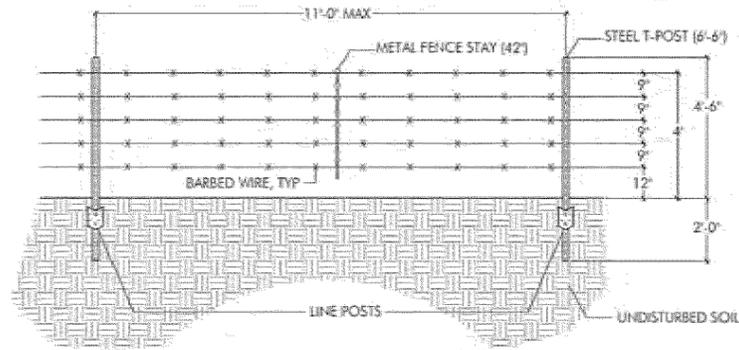
| NO. | REVISIONS | REVISED BY | DATE |
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PETERSEN RANCH MITIGATION BANK
 AREA E AS-BUILT SET
 L-5A FENCE PLAN

wra
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS AND PLANNERS
 2169 G East Francisco Blvd.
 San Rafael, CA 94901

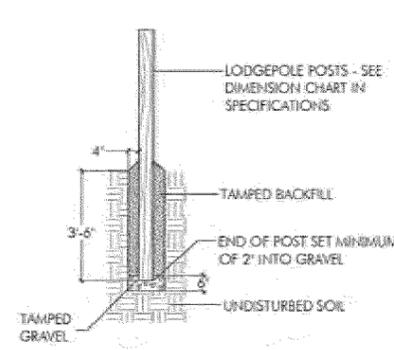
PROJECT #21065 | DRAWN BY: MAS | CHECKED BY: RBB | SHEET: L-5 | DATE: NOV 4, 2016

PERIMETER FENCE DETAILS

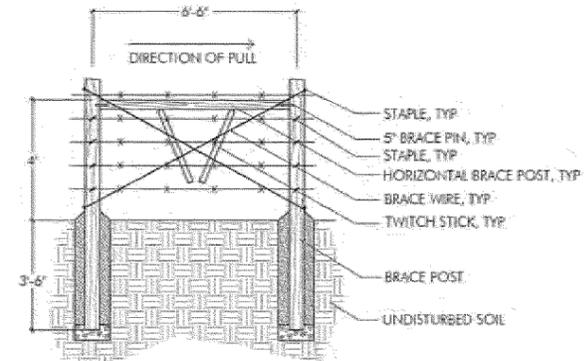


NOTES:
 1. THE CONTRACTOR SHALL PLACE 1/4\"/>

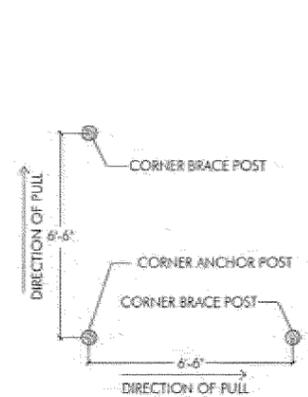
1 FENCE LINE SECTION
 NOT TO SCALE



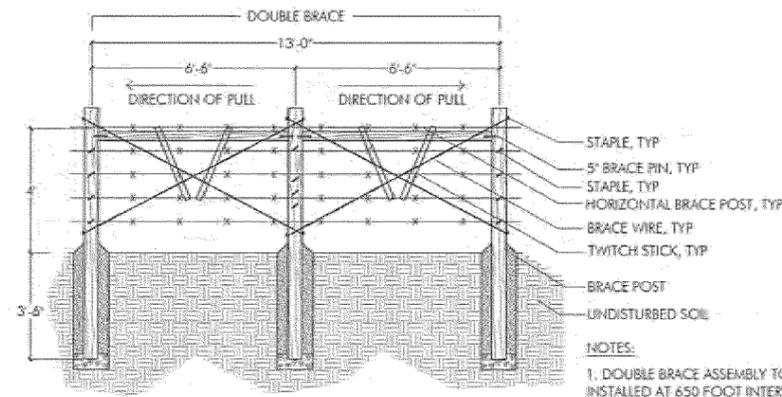
2 BRACE POST INSTALLATION
 NOT TO SCALE



3 CORNER BRACE SECTION
 NOT TO SCALE

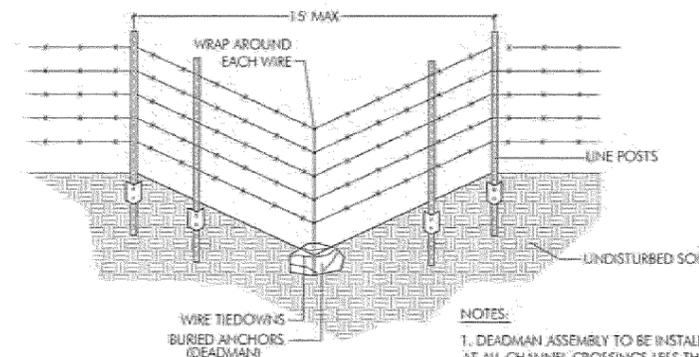


4 CORNER BRACE PLAN VIEW
 NOT TO SCALE



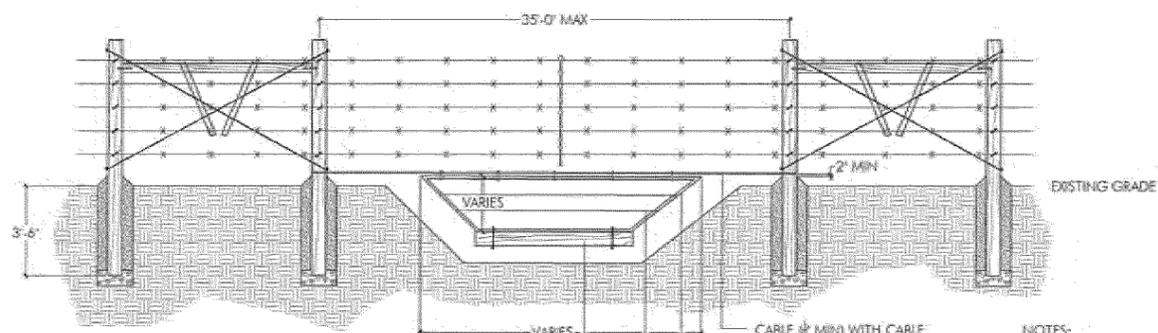
NOTES:
 1. DOUBLE BRACE ASSEMBLY TO BE INSTALLED AT 650 FOOT INTERVALS AND AT ALL TOPOGRAPHIC CHANGES OF 1.5 PERCENT OR MORE.

5 DOUBLE LINE BRACE SECTION
 NOT TO SCALE



NOTES:
 1. DEADMAN ASSEMBLY TO BE INSTALLED AT ALL CHANNEL CROSSINGS LESS THAN 15 FEET WIDE.

6 DEADMAN SECTION
 SCALE: 1/4\"/>



NOTES:
 1. HINGED FLOOD GATE ASSEMBLY TO BE INSTALLED AT ALL CHANNEL CROSSINGS GREATER THAN 15 FEET WIDE.
 2. THIS HINGED FLOOD GATE IS GIVEN AS AN EXAMPLE AS HEIGHT AND WIDTH WILL VARY DEPENDING ON CHANNEL ORDINARY HIGH WATER MARK.

7 HINGED FLOOD GATE ASSEMBLY
 NOT TO SCALE

| NO. | REVISIONS | REVISED BY | DATE |
|-----|-----------|------------|------|
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**PETERSEN RANCH MITIGATION BANK
 AREA E AS-BUILT SET
 L-5B PERIMETER FENCE DETAILS**

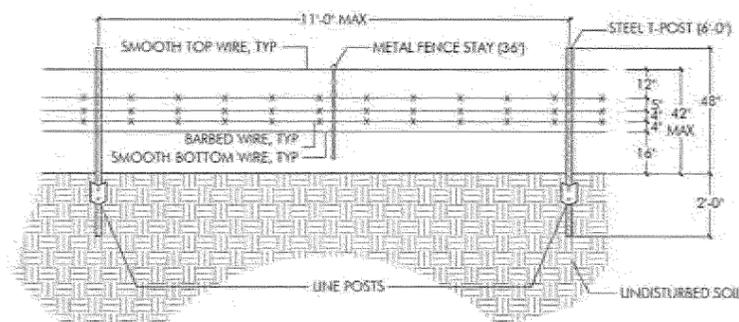


**ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS AND PLANNERS**
 2169-G East Francisco Blvd.
 San Rafael, CA 94901

PROJECT #21065 | DRAWN BY: MAS | CHECKED BY: RBB | SHEET: 7 OF 17 | DATE: NOV 4, 2016

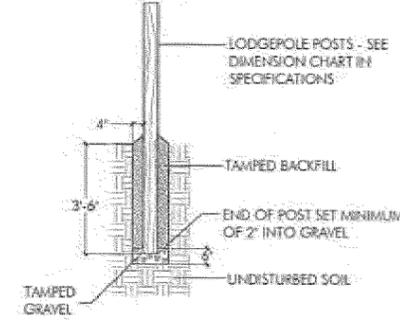
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WILDLIFE FENCE DETAILS

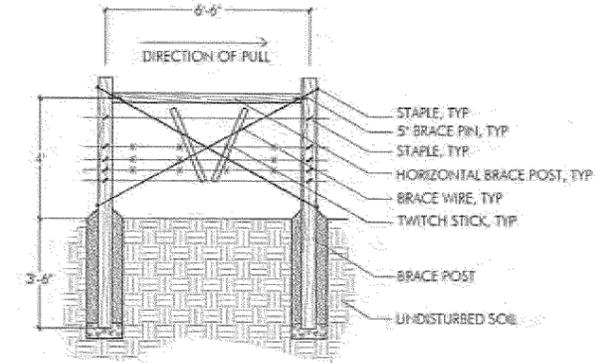


NOTES:
 1. WILDLIFE VISIBILITY MARKERS: EVERY 50 FEET THE CONTRACTOR SHALL IMPLEMENT DURABLE VINYL MARKERS TO INCREASE WIRE VISIBILITY.

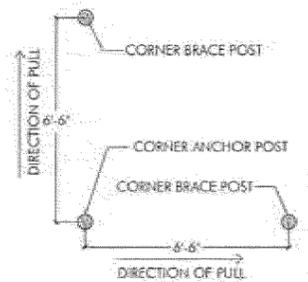
1 FENCE LINE SECTION
 NOT TO SCALE



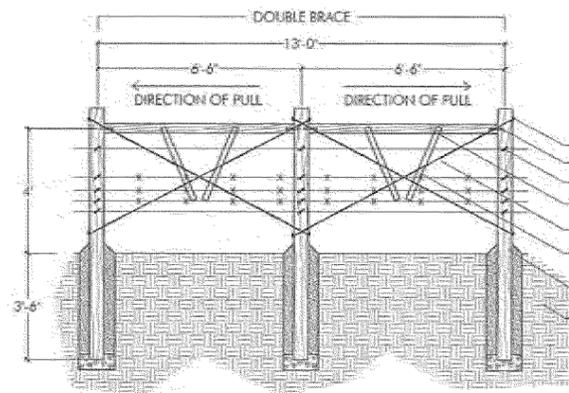
2 BRACE POST INSTALLATION
 NOT TO SCALE



3 CORNER BRACE SECTION
 NOT TO SCALE

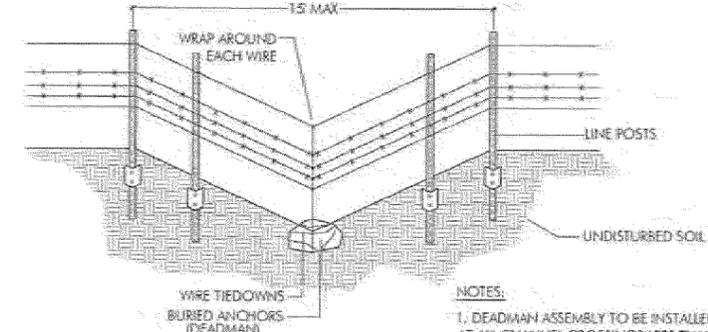


4 CORNER BRACE PLAN VIEW
 NOT TO SCALE



NOTES:
 1. DOUBLE BRACE ASSEMBLY TO BE INSTALLED AT 650 FOOT INTERVALS AND AT ALL TOPOGRAPHIC CHANGES OF 15 PERCENT OR MORE.

5 DOUBLE LINE BRACE SECTION
 NOT TO SCALE



NOTES:
 1. DEADMAN ASSEMBLY TO BE INSTALLED AT ALL CHANNEL CROSSINGS LESS THAN 15 FEET WIDE

6 DEADMAN SECTION
 NOT TO SCALE

| NO. | REVISIONS | REVISED BY | DATE |
|-----|-----------|------------|------|
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PETERSEN RANCH MITIGATION BANK
 AREA E AS-BUILT SET
 L-5C INTERIOR FENCE DETAILS



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 San Rafael, CA 94901

PROJECT #21065 | DRAWN BY: MAS | CHECKED BY: RBB | SHEET: 8 OF 17 | DATE: NOV 4, 2016

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ALLUVIAL FLOODPLAIN AS-BUILT SEED MIX

| APPLICATION RATE PURE LIVE SEED (LB./AC.) | SYMBOL | BOTANICAL NAME | COMMON NAME |
|--|---------|----------------------------------|------------------------|
| 0.10 | ART DRA | ARTEMISA DRACUNCULUS | WILD TARRAGON |
| 0.25 | ART TRI | ARTEMISA TRIDENTATA SSP. PARISHI | PARISH'S SAGEBRUSH |
| 2.00 | BRO CAR | BROMUS CARINATUS | CALIFORNIA BROME |
| 3.00 | EIV EIV | EIVANUS EIVANOIDES | SCOTTLERUSH SORRELLEAF |
| 3.00 | EIV TRA | EIVANUS TRACHICALLUS | SLENDER WHEATGRASS |
| 0.50 | ERI CKA | ERIOCHLOA CRASSIFOLIA | THICK LEAF YERBA SANTA |
| 1.00 | ERI FAL | ERIOCHLOA FASCICULATA | CALIFORNIA BUCKWHEAT |
| 4.00 | FES MIC | FESTUCA MICROSTACHYS | SHAW FESCUE |
| 1.00 | LEP SOL | LEPOSPARTUM SOLIDUM | SCABERPOON |
| 3.00 | LUP TRU | LUPINUS TRUNCATUS | COLLARED ANNUAL SUPINE |
| 4.00 | HOR ERA | HORDEUM BRACHYANTHERUM | MEADOW BARLEY |
| 2.00 | MEL IMP | MELICA IMPERFECTA | SHAMFLOWER MELIC |
| 0.50 | MUL RIG | MULHBERGIA RIGENS | DEERGRASS |
| 4.00 | POA SEC | POA SECUNDA | PINE BLUEGRASS |
| 0.50 | SAL ARI | SALVA ARIANA | WHITE SAGE |
| 1.00 | SAL COL | SALVA COLLINSARAE | CHOK SAGE |
| 4.00 | STI PUL | STIPA PUBESCENS | PURPLE NEEDLEGRASS |
| 33.85 | | TOTAL | |

NATIVE EROSION CONTROL MIX
(OFF-THE-SHELF SEED MIX BY S&S SEEDS)

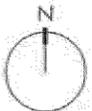
| APPLICATION RATE PURE LIVE SEED (LB./AC.) | SYMBOL | BOTANICAL NAME | COMMON NAME |
|--|---------|----------------------|------------------|
| 20.00 | BRO CAR | BROMUS CARINATUS | CALIFORNIA BROME |
| 8.00 | FES MIC | FESTUCA MICROSTACHYS | SHAW FESCUE |
| 4.00 | TRF CL | TRIFOLIUM CRUCIATUM | TREE CLOVER |
| 32.00 | | TOTAL | |

SEEDING NOTES:

1. SEED SHALL BE APPLIED ONLY AFTER ALL GRADING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
2. SEEDING AREAS SHALL BE PREPARED USING EROSION CONTROL MATS OR EROSION CONTROL DRAPES IMMEDIATELY PRIOR TO SEEDING WITHOUT DISTURBING EXISTING NATIVE VEGETATION TO THE EXTENT PRACTICABLE.
3. IN AREAS WITH EXISTING VEGETATION GREATER THAN 1 FOOT TALL, A HAND HELD MOWER SHALL BE USED FOR HYDROSEEDING TO MINIMIZE COVER FROM EXISTING VEGETATION.
4. NO BRANCHES TO BE APPLIED IN SEEDING AREAS #1 AND #2.

LEGEND

- EXISTING CONTOUR
- ▨ ALLUVIAL FLOODPLAIN SEEDING AREA (AS BUILT)
- ▤ EROSION CONTROL SEEDING AREA (AS BUILT)
- EXISTING UTILITY POLE
- EXISTING JURISDICTIONAL WETLANDS



1 ELIZABETH LAKE SEEDING PLAN
1" = 200'

| NO. | REVISIONS | REVISED BY | DATE |
|-----|-----------|------------|------|
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PETERSEN RANCH MITIGATION BANK
AREA E AS-BUILT SET
L-4 SEEDING PLAN

wra
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS AND PLANNERS
2169-G East Francisco Blvd.
San Rafael, CA 94901

PROJECT #21065 | DRAWN BY: MAS | CHECKED BY: RBB | SHEET: L-4 | DATE: NOV 4, 2016

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